PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/PEA/416

International application No. PCT/GB2004/003945	International filing date *(day/month/year)* 16.09.2004	Priority date *(day/month/year)* 16.09.2003

International Patent Classification (IPC) or national classification and IPC

G06F17/30

Applicant

COGNIMA LTD et al.

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1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *sent to the applicant and to the International Bureau)* a total of 4 sheets, as follows:

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in Item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

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4. This report contains indications relating to the following items:

   ☒ Box No. I   Basis of the opinion

   ☐ Box No. II   Priority

   ☐ Box No. III   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   ☐ Box No. IV   Lack of unity of invention

   ☒ Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   ☐ Box No. VI   Certain documents cited

   ☐ Box No. VII   Certain defects in the international application

   ☐ Box No. VIII   Certain observations on the international application

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Date of submission of the demand 08.07.2005	Date of completion of this report 02.12.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax +49 89 2399 - 4465	Authorized Officer König, W Telephone No. +49 89 2399-2297

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

    ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    ☐ international search (under Rules 12.3 and 23.1(b))
    ☐ publication of the international application (under Rule 12.4)
    ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

    Description, Pages

    1, 2, 4-10   as originally filed

    3   received on 12.11.2005 with letter of 23.06.2005

    Claims, Numbers

    1-16   received on 12.11.2005 with letter of 23.06.2005

    ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
    ☐ the description, pages
    ☐ the claims, Nos.
    ☐ the drawings, sheets/figs
    ☐ the sequence listing *(specify)*:
    ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
    ☐ the description, pages
    ☐ the claims, Nos.
    ☐ the drawings, sheets/figs
    ☐ the sequence listing *(specify)*:
    ☐ any table(s) related to sequence listing *(specify)*:

    * *If item 4 applies, some or all of these sheets may be marked "superseded."*

Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-16
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-16
Industrial applicability (IA)	Yes:	Claims	1-16
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:
D1= WO 03/003688 A (SUN MICROSYSTEMS, INC) 9 January 2003 (2003-01-09)

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the language of claim 1 is used as far as possible):

A method of providing content to a mobile web browsing device from any of several different web servers, comprising the steps of : (a) receiving at a remote computer, connected to both the device and cache of those web servers over a wireless network, a ~~log of~~ data identifying content ~~that has been viewed by the specific device, the log being generated and sent by the device;~~ (b) the remote computer automatically identifying any of that ~~viewed~~ content that has been updated; (c) the remote computer automatically causing any of that identified content stored on any of the servers to be sent to the device over the wireless network; (d) causing that updated content to be automatically stored in device memory (see the passages cited in the search report, in particular page 6, second paragraph). (The passages crossed out indicate aspects not disclosed by D1).

(It should be noted that in order to periodically <u>synchronise the cache</u> of a mobile device with the servers and/or service provides <u>to update the cache</u> of the mobile device as stated in D1 (page 5, paragraph 4 to page 6, paragraph 2) it is **implicit** that <u>the servers and/or service providers receive data identifying the cached content.</u>)

The subject-matter of claim 1 therefore differs from this known D1 in that:

(A)   receiving at a remote computer "a log of data identifying content that has been <u>viewed</u> by the device, the log being generated and sent by the device"

to identify data to be updated in the device.

However, D1 discloses "receiving at a remote computer data identifying cached content to

be updated in the device".

The effect of feature (A) is to <u>identify content to be updated in the mobile web browsing device</u>.

The objective technical problem may therefore be regarded as "how to identify content to be updated in the mobile web browsing device".

The feature (A) is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

Hence, claim 1 - and corresponding claim 16 - are not considered to satisfy the requirements of Article 33(3) PCT.

Dependent claims 2-15 would not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, since the additional features are considered to specify mere implementation options.

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SUMMARY OF THE INVENTION

In a first aspect, there is a method of providing content to a mobile web browsing device from any of several different web servers, comprising the steps of:

5   (a)   receiving at a remote computer, connected to both the device and each of those web servers over a wireless network, a log of data identifying content that has been viewed by that specific device, the log being generated and sent by the device;

    (b)   the remote computer automatically identifying any of that viewed content that
10   has been updated;

    (c)   the remote computer automatically causing any of that identified, updated content stored on any of the web servers to be sent to the device over the wireless network;

    (d)   causing that updated content to be automatically stored in device memory.
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Any kind of content can be identified and automatically sent to and stored at the device in this way without explicit user request; although the term 'web' is used in this specification, this term is not limited to HTML type content, but also includes all other forms of mark-up language, such as WML, XML etc., as well as content of any other
20   kind. For example, it can include news (e.g. RSS feeds), weather, fan sites and other general content types. The only requirement is that the content can be downloaded to a device from a content server of some description, can be updated at its source or at the remote server, and can be stored in local device memory. Hence, the terms web browsing, web server, and web page should be expansively construed to cover any kind
25   of content acquisition, content server, and content.

The device may be a mobile telephone, smart phone, communicator, laptop computer, PDA, dedicated web terminal or similar. These devices will typically operate over wide area wireless networks such as GSM, UMTS,CDMA etc. cellular networks. The device
30   may optionally also (or alternatively) connect to the origin web server using (at least in part) a local area wireless network, such as 902.11 or Bluetooth wireless networks. In one implementation, the log is generated at the device and replicated to the remote computer.

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CLAIMS

1.   A method of providing content to a mobile web browsing device from any of several different web servers, comprising the steps of:

    (a)   receiving at a remote computer, connected to both the device and each of those web servers over a wireless network, a log of data identifying content that has been viewed by that specific device, the log being generated and sent by the device;

    (b)   the remote computer automatically identifying any of that viewed content that has been updated;

    (c)   the remote computer automatically causing any of that identified, updated content stored on any of the web servers to be sent to the device over the wireless network;

    (d)   causing that updated content to be automatically stored in device memory.

2.   The method of Claim 1 in which the log is generated at the device and replicated at the remote computer.

3.   The method of Claim 1 in which the remote computer views multiple content from the web server and determines if the content has changed.

4.   The method of Claim 1 in which the remote computer views multiple content from the web server and determines when the content has changed.

5.   The method of Claim 1 in which the remote computer is notified by the web server if the content on the server has changed.

6.   The method of Claim 1 in which the remote computer directly sends updated content to the device or causes the updated content to be sent to the device.

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7.   The method of Claim 6 in which the remote computer makes a decision whether or not to send, or cause to be sent, the updated content, by taking into account one or more of the following:

(a)   How fast the content on the web server is changing;

(b)   How often the user views the content;

(c)   What time of day it is;

(d)   What day of the week it is;

(e)   What an operator of the wireless network wants to promote.

8.   The method of Claim 1 in which the operator of the wireless network can set thresholds for all of the above conditions.

9.   The method of Claim 7 or 8 in which these thresholds are controlled at the remote computer and so can be updated at any point by the operator if it wants to implement different caching strategies.

10.   The method of Claim 1 in which the remote computer determines how long the cached data on the phone should stay cached before the data is removed and the device goes back to using a normal download from the web server.

11.   The method of Claim 1 in which the remote computer sends data to the device that automatically causes the device to display a link to new content, the new content being automatically stored on the device.

12.   The method of Claim 1 in which the device includes a user interface that indicates whether given content is already stored in device memory or not.

13.   The method of Claim 1 in which the log also records the time that a specific item of content was viewed by the device.

14.   The method of Claim 1 in which the log identifies whether content that is being viewed is updated content that had earlier been stored in device memory.

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15.   The method of Claim 1 in which the updated content is sent at off-peak periods or to otherwise fill bandwidth troughs.

16.   A mobile web browsing device able to download and store content from a web
5 server over a wireless network, wherein the device is programmed to:

        (a)   create a log of data identifying the content that is being viewed by the device;

        (b)   send that log to a remote computer, the remote computer being connected to the web server and the device over a wireless network;

10   (c)   receive from the web server any content that has been identified by the remote computer as having been updated;

        (d)   automatically store that updated content in memory.

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